

Draft Cal/EPA Fuels Guidance Document

Lex Mitchell

May 26, 2010

Overview

- Background
- Overview
- Next Steps
- Q&A Discussion
- Contacts

Background

- Fuels and biofuels have become an issue of national attention for three main reasons:
 - Global Warming
 - National security
 - Locally based lifestyle movement

Background

- California Government is responsible for ensuring the safety of its citizens and environment with a transition to greater use of biofuels.
- Draft Cal/EPA Fuels Guidance Document was created to help people understand the regulations associated with current and future fuels.

Background

- Draft document released for public comment in March
- 13 Comments received

Overview

- Layout of document:
 - ***Chapter 1: Introduction***
 - Chapter 2: Fuels Matrix
 - Chapter 3: Definitions of Fuels and Fuel Requirements
 - Chapter 4: Specific Requirements of Fuels in California

Overview

Ch. 1 Introduction

- Four main agencies involved:
 - Air Resources Board
 - California Department of Food & Agriculture, Division of Measurement Standards
 - Office of the State Fire Marshal
 - State Water Resources Control Board

Overview

Ch. 1 Introduction

- Air Resources Board
 - Part of Cal/EPA
 - Regulates air emissions from transportation fuels
 - Regulates direct and indirect air pollutants, and global warming gases

Overview

Ch. 1 Introduction

- CDFA, Division of Measurement Standards
 - Regulates quantity and quality of transportation fuels
 - Protects public from unfair measurement practices
 - Ensures fair competition

Overview

Ch. 1 Introduction

- Office of the State Fire Marshal
 - Regulates the storage and handling of combustible materials
 - Develops and applies fire prevention techniques
 - Educates about fire safety and prevention

Overview

Ch. 1 Introduction

- State Water Resources Control Board
 - Part of Cal/EPA
 - Regulates the storage of transportation fuel underground
 - Prevents contamination of water supply by hazardous substances
 - Coordinates and oversees local agencies responsible for enforcement

Overview

- Layout of document:
 - Chapter 1: Introduction
 - ***Chapter 2: Fuels Matrix***
 - Chapter 3: Definitions of Fuels and Fuel Requirements
 - Chapter 4: Specific Requirements of Fuels in California

Overview

Ch. 2 Fuels Matrix

- Fuels matrix broken into four parts:
 - ARB matrix
 - CDFA, DMS matrix
 - OSFM matrix
 - SWRCB matrix

Overview

Ch. 2 Fuels Matrix

■ ARB Matrix:

Requirements	Fuels														
	Gasoline w/ E10	E85	Diesel w/o B5	Diesel w/ B5	E15	E20	E30	E100 Fuel	Isobutanol 16%	B6-B20	B21-B100 Fuel	R1-R100 Fuel	CNG	LNG	LPG
Future Fuels and Requirements Status-Air Resources Board Issues															
	D4814	D6798	D975	D975	None	None	None	D4806	None	D7467	None	D975	None	None	D1835
ASTM	●	●	●	●	■	■	■	●	■	●	■	●	●	●	●
Multimedia	●	●	●	●	■	■	■	●	■	■	■	■	●	■	■
Pipelineable	▲	▲	●	▲	▲	▲	▲	▲	●	▲	▲	●	●	●	●
Vapor Recovery	●	■	●	●	■	■	■	■	■	●	●	●	●	●	●
Vehicle Issues	●	▲	●	▲	▲	▲	▲	■	▲	▲	■	●	▲	▲	▲
ARB Specifications	●	●	●	●	■	■	■	●	■	■	■	■	●	●	●
Production Issues	●	●	●	●	●	●	●	●	■	●	■	■	●	●	■
Fueling Issues	●	■	●	●	■	■	■	■	■	●	●	●	●	●	■

Overview

Ch. 2 Fuels Matrix

■ CDFA, DMS Matrix:

Requirements	Fuels																			Electricity	Urea*
	Gasoline w/ E10	E85	Diesel w/o B5	Diesel w/ B5	E15	E20	E30	E100 Fuel	Isobutanol 16%	B6-B20	B21-B100 Fuel	R1-R100 Fuel	CNG	LNG	LPG	Biogas	Liquid Biogas	H ₂			
Future Fuels and Requirements Status-CDFA, Division of Measurement Standards Issues																					
Authority to regulate	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	■	N/A	
Regulations	●	●	●	●	■	■	■	■	●	●	■	■	●	●	●	■	■	●	■	N/A	
Quality Standard for fuel use	●	●	●	●	■	■	■	■	●	●	■	■	●	●	●	■	■	●	N/A	N/A	
Quality test methods	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	■	●	●	
Quality test equipment	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	■	●	●	
Metering systems	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	■	●	●	
Quantity test methods	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	■	●	●	
Quantity test equipment	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	■	●	●	
Method of Sale	●	●	●	●	■	■	■	■	●	●	■	■	●	●	●	■	■	■	■	●	
Labeling	●	●	●	●	■	■	■	■	●	●	■	■	●	●	●	■	■	■	■	●	
Advertising	●	●	●	●	■	■	■	■	●	●	■	■	●	●	●	■	■	■	■	●	

Overview

Ch. 2 Fuels Matrix

■ OSFM Matrix:

Requirements	Fuels																			
	Gasoline w/ E10	E85	Diesel w/o B5	Diesel w/ B5	E15	E20	E30	E100 Fuel	Isobutanol 16%	B6-B20	B21-B100 Fuel	R1-R100 Fuel	CNG	LNG	LPG	Biogas	Liquid Biogas	H ₂	Electricity	Urea*
Future Fuels and Requirements Status-CAL FIRE Office of The State Fire Marshal Issues																				
Regulated by CA Fire Code	●	■		●	●	●	■	■	●	●	●	●	●	●	●	●	●	●	●	N/A
NFPA Standards	●	■		●	●	●	■	■	●	●	●	●	●	●	●	●	●	●	●	N/A
Vapor Recovery & Dispenser	●	■		●	●	●	■	■	●	●	●	●	●	●	●	●	●	●	●	N/A
Tanks	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	N/A
● = There may be permits required, but there are no technical or regulatory requirements remaining																				
▲ = There are technical or regulatory issues , but there are established paths to resolve them																				
■ = There are significant technical or regulatory requirements remaining																				
*Urea is not a fuel, it is added post combustion to reduce emissions of Nitrogen Oxides by catalytic reduction.																				

Overview

Ch. 2 Fuels Matrix

■ SWRCB Matrix:

Requirements	Fuels																	
	Gasoline w/ E10	E85	Diesel w/o B5	Diesel w/ B5	E15	E20	E30	E100 Fuel	Isobutanol 16%	B6-B20	B21-B100 Fuel	R1-R100 Fuel	CNG	LNG	LPG	Biogas	Liquid Biogas	H ₂
Future Fuels and Requirements Status - State Water Resources Control Board (UST Program)																		
Regulated by CA Health and Safety Code	●	●	●	●	●	●	●	●	●	●	●	●	N/A	N/A	N/A	N/A	N/A	N/A
Leak Detection Functional Testing	●	■	●	● [†]	■	■	■	■	■	● [†]	■	■	N/A	N/A	N/A	N/A	N/A	N/A
Testing Organization Approval	●	●	●	●	●	●	●	●	■	● [†]	■	■	N/A	N/A	N/A	N/A	N/A	N/A
Industry Code and Engineering Standards	●	●	●	●	●	●	●	●	■	● [†]	■	■	N/A	N/A	N/A	N/A	N/A	N/A

Overview

- Layout of document:
 - Chapter 1: Introduction
 - Chapter 2: Fuels Matrix
 - ***Chapter 3: Definitions of Fuels and Fuel Requirements***
 - Chapter 4: Specific Requirements of Fuels in California

Overview

Ch. 3 Definitions

- Fuels Covered:
 - Gasoline w/ up to E10
 - E85
 - Diesel w/o B5
 - Diesel w/ B5
 - E15
 - E20
 - E30
 - E100

Overview

Ch. 3 Definitions

- Fuels Covered:
 - Biobutanol 16%
 - B6-B20
 - B21-B100
 - R1-R100
 - CNG, LNG, LPG
 - Biogas, Liq Biogas
 - H₂
 - Electricity
 - Diesel Exhaust Fluid

Overview

- Layout of document:
 - Chapter 1: Introduction
 - Chapter 2: Fuels Matrix
 - Chapter 3: Definitions of Fuels and Fuel Requirements
 - ***Chapter 4: Specific Requirements of Fuels in California***

Overview

Ch. 4 Specific Requirements

- Fuels:
 - Gasoline w/ up to E10
 - E85
 - Diesel w/o B5
 - Diesel w/ B5
 - E15
 - E20
 - E30
 - E100

Overview

Ch. 4 Specific Requirements

- Fuels:
 - Biobutanol 16%
 - B6-B20
 - B21-B100
 - R1-R100
 - CNG, LNG, LPG
 - Biogas, Liq Biogas
 - H₂
 - Electricity
 - Diesel Exhaust Fluid

Next Steps

- Consider comments, revise as necessary
- Consider addition of section to address future needs
- Consider need for meetings, workshopping

Q&A Discussion

Contacts

Lex Mitchell

Air Pollution Specialist, ARB
(916) 327-1513
amitchel@arb.ca.gov

Floyd Vergara

Manager, Industrial Section, ARB
(916) 327-5986
fvergara@arb.ca.gov

Don Johnson

Assistant Secretary, Cal/EPA
(916) 322-8284
donj@calepa.ca.gov

<http://www.calepa.ca.gov/biofuels/>